Rockwell International

Service And Parts Manual

MODEL 14RDII

1000-0448

14RDII ACCESSORIES

Part Number	Description
8102-4891	Gift Carton
8102-4741	Insert Gift Carton
1226R21-001	Instruction Manual
20167H39-021	Carrying Case
105R	Adapter
109R	Rechargeable Kit Available (includes charger & batteries)

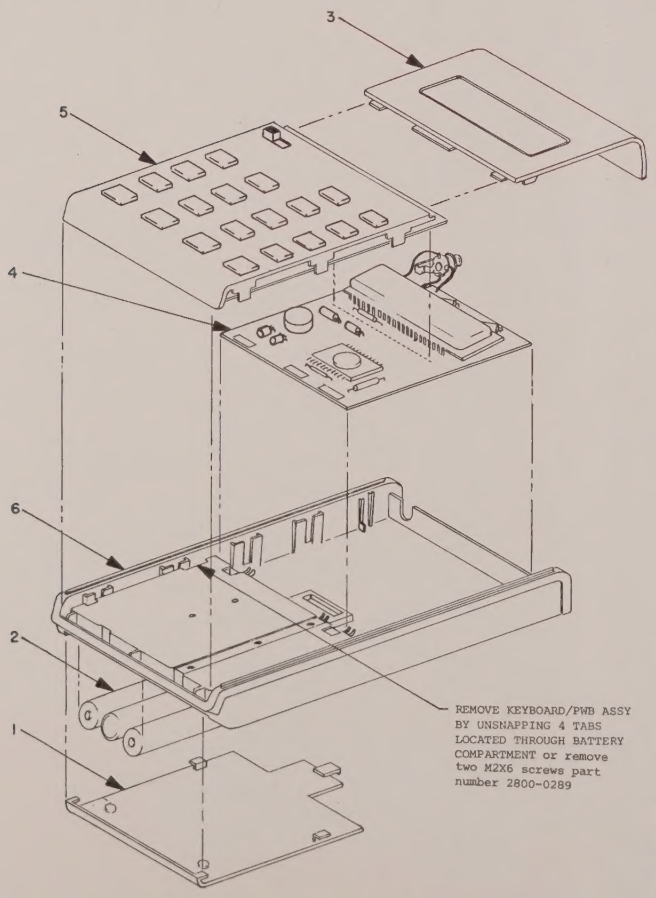
14RDII TOP ASSEMBLY

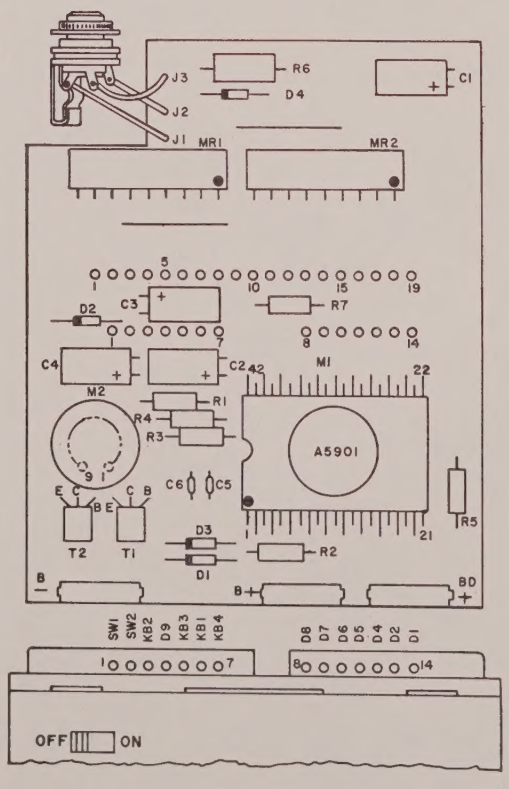
Ref. No.	Part Number	Description
1	8102-4585	Battery Cover (includes 2 rubber feet)
2	8102-4598	Batteries (AA Nonrechargeable) 3 required
3	8102-4751	Lens
4	8102-4893	Printed Circuit Board Assembly
5	8102-4892	Keyboard Assembly (includes Bezel)
6	8102-4769	Bottom Case (includes battery clips and 2 rubber feet)
	8102-4738	Battery clip single, 2 required
	8102-4597	Battery clip double, 3 required
	8102-4894	Identification Label
	8102-4730	Rubber feet 4 required

NOTE: Ref. No. sequence in order of disassembly, items 4 and 5 come out as an assembly.

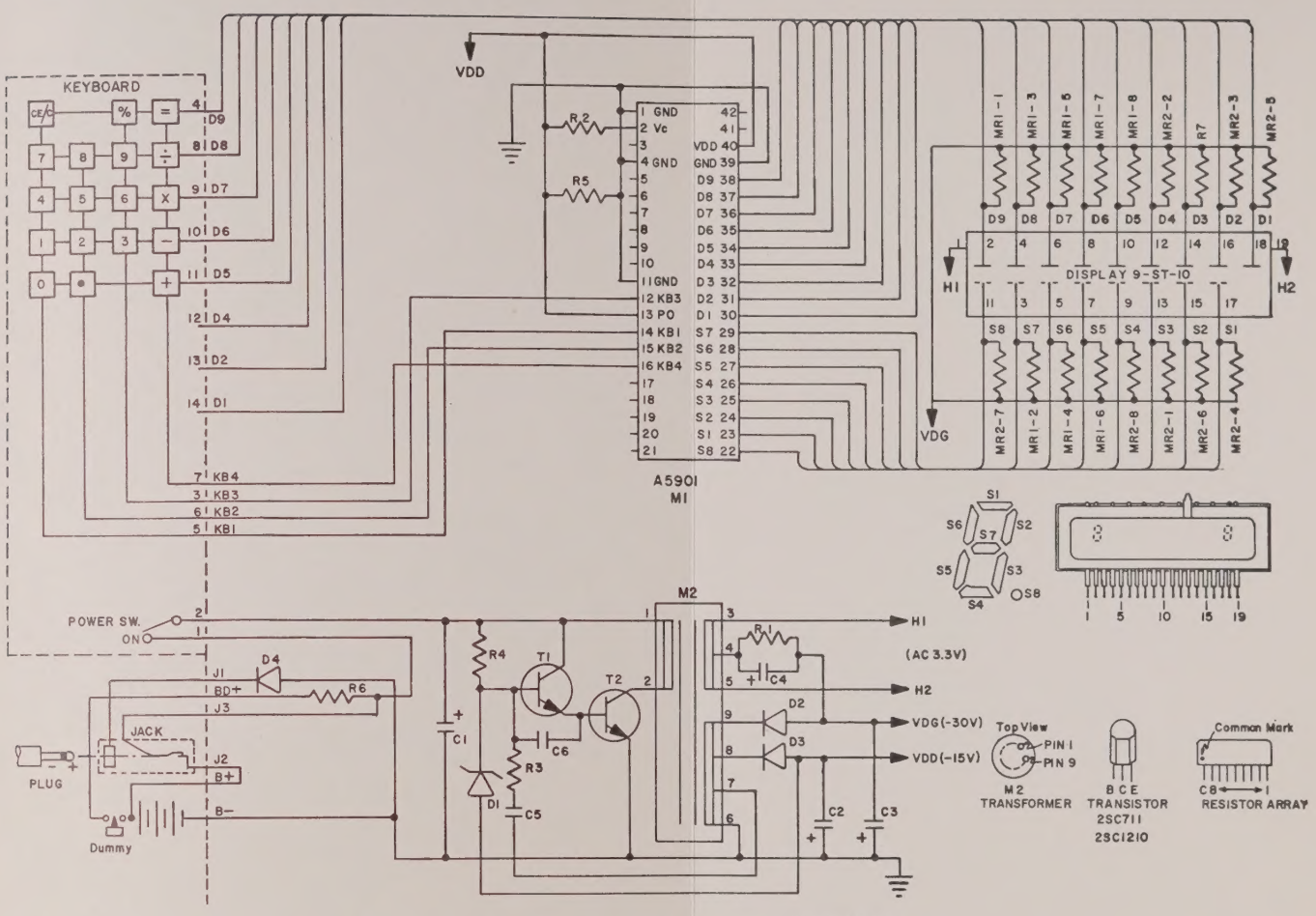
14RDII LOGIC ASSY.

Ref. No.	Part Number	Description
	8102-4893	Printed Circuit Board Assembly
T1	4800-0009	Transistor 2SC711
T2	4800-0064	Transistor 2SC1210
D1	4801-0076	Diode, Zener 16.5V ± 3%
D2	4801-0078	Diode Switching 1S2471
D3	4801-0079	Diode Switching 1S2472
D4	4801-0084	Diode SR-10D
R1	421R02-037	Resistor Carbon Comp. 2.7K ohm 1/4W 10%
R2	421R02-079	Resistor Carbon Comp 56K ohm 1/4W 5%
R3	421R02-101	Resistor Carbon Comp 1K ohm 1/4W 10%
R4	421R02-048	Resistor Carbon Comp 22K ohm 1/4W 10%
R5	1408-0183	Resistor Carbon Comp 30K ohm 1/4W 10%
R6	1408-0207	Resistor Carbon Comp 56 ohm 1/2W 10%
R7	1408-0109	Resistor Carbon Comp 150K ohm 1/4W 10%
MR1, MR2	1408-0200	Resistor Array 150K ohm X8
C1	1502-0068	Capacitor Radial Lead 33 uf 10V
C2, C3	1502-0069	Capacitor Radial Lead 4.7 uf 50V
C4	1502-0071	Capacitor Radial Lead 0.47 uf 50V
C5	1502-0072	Capacitor Ceramic Disc 470 PF 50V
C6	1502-0076	Capacitor Ceramic Disc 220 PF 50V
M2	8102-4756	DC-DC Converter
M1	A5901	MOS/LSI
	8102-4768	17 Pin Connector (Keyboard to PWB)
	313R09-001	Jack
	5700-0016	Display
	8102-4747	Display Base (2 required)





SYMPTOM
1. Display does no
2. Dim display.
3. Will not clear initially turne
4. Random segments points missing or more digits.
5. Same segment mi all digits.
6. Digits missing display.
7. Display all 8's random segments
8. One or more key not enter.
9. Display will no
10. Incorrect arith operation (wron



TROUBLE SHOOTING TABLE

	PROBABLE CAUSE	CHECK
light.	Discharged batteries.	Check battery voltage. Should be greater than 2.4 volts.
	Defective On-Off switch.	Check switch for continuity in On position.
	Defective AC adapter jack.	Check adapter for continuity between J2 and J3.
	Defective power supply.	Check power supply circuitry
	Defective MOS device.	Check MOS strobe signals.
	Defective display.	Check filament continuity.
	Discharged batteries.	Check battery voltage. Should be greater than 2.4 volts.
	Defective power supply.	Check power supply circuitry.
	Defective display.	Replace the display.
en ON.	On-Off switch.	Check for switch bounce.
	MOS device.	Check VDD voltage.
r decimal om one	Display.	Check the display solder connections. If good, replace the display.
	MOS device.	Check segment outputs.
ing from	Display.	Check the display solder connections. If good, replace the display.
	MOS device.	Check segment output.
	Resistor arrays.	Check MR1 and MR2 for shorts.
om the	Display	Check the display solder connections. If good, replace the display.
	MOS device.	Check for strobe outputs.
r	On-Off switch.	Check for intermittent condition.
	MOS device.	Turn off and check PØ at turn on.
do	Keyboard	Check keyboard continuity, to printed wiring board.
	MOS device.	Check strobes and keyboard returns.
clear.	Keyboard.	Check keyboard continuity, to printed wiring board.
	MOS device.	Check strobe D9 and KB1.
tic answer).	MOS device.	Clear calculator and repeat operation observing each entry.
	Clock frequency.	R2
	Power supply circuitry.	Check power supply voltages.

Diagnostic Test

Keyboard Entry	Display	Comments
CE/C	0.	
-8.8888888	8.8888888	While entering this number, verify that all decimal points are operative across the display and that only one decimal point is on at any one time.
=	-8.8888888	
+/-	8.8888888	
CE/C	0.	
12345678	12345678.	
X	12345678.	
90000000	90000000.	
=	1.1.1.1.1.1.1.0.	Overflow condition
CE/C	11111110.	
X	11111110.	
4	4.	
=	44444440.	
÷	44444440.	
2	2.	
+	22222220.	
8	8.	
−	22222228.	
6	6.	
X	22222222.	
5	5.	
=	1111111.1	

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